

What is claimed is:

1. An inverter comprising:
 - a main circuit part that converts DC power to AC power;
 - 5 a communication part that communicates with an external apparatus through a network; and
 - a control circuit part that controls conversion by said main circuit part and transmits condition data representing current conditions related to said inverter to said external apparatus through said communication part.
- 10 2. The inverter of claim 1 wherein said control circuit part includes:
 - a measuring part that measures an operating time of a system associated with said inverter;
 - a memory that stores a threshold value related to said operating time; and
 - 15 a comparing part that compares a measured operating time measured by said measuring part with said threshold value, said condition data including a result of comparison by said comparing part.
- 20 3. The inverter of claim 2 wherein said measuring part measures said operating time based on a detection output from an external sensor.
- 25 4. The inverter of claim 3 serving to supply AC power to a motor, wherein said sensor detects an operation caused by a motion of said motor.
5. The inverter of claim 3 wherein said sensor detects an operation caused by an output from an output device connected to said inverter.
- 30 6. The inverter of claim 3 wherein said measuring part measures said operating time based on a change in an operation command from said inverter and said detection output from said sensor.

7. The inverter of claim 5 wherein said measuring part measures said operating time based on a change in a control output to said output device and said detection output from said sensor.

5 8. The inverter of claim 3 wherein said sensor is one of a plurality of sensors and said measuring part measures said operating time based on detection outputs from said plurality of sensors.

9. The inverter of claim 1 further comprising a current tracing part that
10 carries out current tracing by sampling output current values from said main circuit part and storing said sampled output current values in a time sequence in said memory;
wherein said condition data include said output current values traced by said current tracing part.

15 10. The inverter of claim 9 wherein said control circuit part further includes a status data tracing part that stores status data in said memory in correlation with said sampled output current values, said status data showing operation conditions of said inverter when said sampled output current values are sampled.

20 11. The inverter of claim 1 further comprising:
a current tracing part that carries out current tracing by sampling output current values from said main circuit part and storing said sampled output current values in a time sequence in said memory; and
a status data tracing part that stores status data in said memory in correlation with
25 said sampled output current values, said status data showing operation conditions of said inverter when said sampled output current values are sampled;
wherein said condition data include said output current values and said status data traced by said current tracing part and by said status data tracing part.

30 12. The inverter of claim 9 wherein said current tracing part carries out said current tracing based on a trigger that indicates a condition change.

13. The inverter of claim 11 wherein said current tracing part carries out said current tracing based on a trigger that indicates a condition change.